

CW series

Proportional miniature thumb controls •
non-contacting Hall effect technology



DISTINCTIVE FEATURES

Single axis

Analog or PWM outputs

Spring return to center

Snap-in mounting

Designed for joysticks, armrests and panel mounting



ENVIRONMENTAL SPECIFICATIONS

- Operating Temperature: -40 °C to +85 °C (-40 °F to +185 °F)
- Storage Temperature: -40 °C to +85 °C (-40 °F to +185 °F)
- Sealing: No sealing
- EMC Immunity Level: EN61000-4-3
- EMC Emissions Level: EN61000-6-3: 2001
- ESD: EN61000-4-2



ELECTRICAL SPECIFICATIONS

- Supply Voltage Range: 5.00 VDC $\pm$ 0.250 VDC
- Reverse Polarity max: -10 VDC
- Overvoltage max: 16 V
- Output Impedance: 2 Ω
- Return to Center Voltage Tolerance: $\pm$ 200 mV initial
- Minimum load (under Electrical Specs) 1K Ohm



MECHANICAL SPECIFICATIONS

- Operating Force: 0.7 N (0.15 lbf)
- Maximum Vertical Load: 111 N (25 lbf)
- Maximum Horizontal Load: 67 N (15 lbf)
- Mechanical Angle of Movement: $\pm$ 45°
- Expected Life: 3 million lifecycles
- Mass/weight: 4.2 g $\pm$ 1.0 g (0.15 oz $\pm$ 0.03 oz)
- Lever Action (centering): Spring

U.S. Patent #D767,685 S
U.S. Patent #D740,886 S

The company reserves the right to change specifications without notice.



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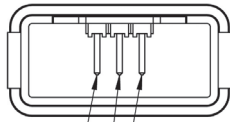
MATERIALS

- Body: Delrin
- Actuator: Glass filled nylon



CONNECTIONS

TERMINATION OPTIONS: A AND B



Pin 1 - 5V power (RED)
Pin 2 - Ground (BLACK)
Pin 3 - Signal (BLUE)

OPTIONAL MATING HARNESS¹
Part number: 505-507

Wire type: 22 AWG 25 cm PTFE

Connector: Molex 0050579503

WIRING SPECIFICATION

Red: Power (5 V)

Black: Ground

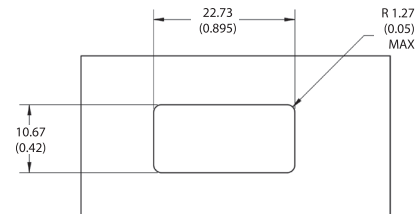
Blue: Signal

¹ - The CW Series is fitted with a three terminal SAMTEC (TLW-103-05-T-S) 2.54 mm header. An optional 22 AWG Mating Harness (PN 505-507) may be specified from the "Terminal" category of the Option Selection Guide.

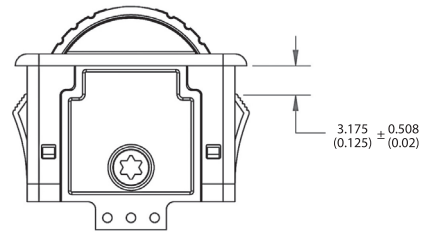


MOUNTING

PANEL CUT-OUT



RECOMMENDED PANEL THICKNESS



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BUILD YOUR PART NUMBER

SERIES	WHEEL SHAPE	TAB SHAPE	ACTUATOR COLOR	MOUNTING
CW	A Ribbed wheel (no tab) B Smooth wheel	0 No Tab 1 Tab 1	BK Black GY Grey	1 Snap-in

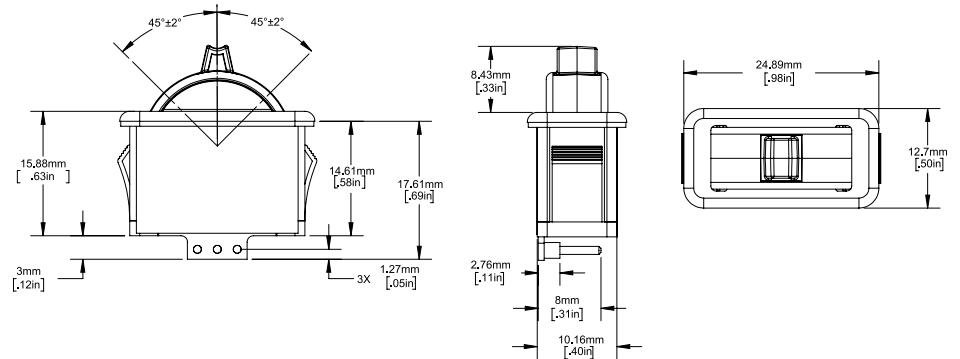
CENTERING OPTION	OUTPUT OPTIONS	TERMINATION
A Standard spring	00 0 V to 5 V 01 0.25 V to 4.75 V 02 0.5 V to 4.5 V 03 1 V to 4 V 04 0 V to 5 V – Sensor 1 ¹ 5 V to 0 V - Sensor 2 05 0.25 V to 4.75 V – Sensor 1 ¹ 4.75 V to 0.25 V - Sensor 2 06 0.5 V to 4.5 V – Sensor 1 ¹ 4.5 V to 0.5 V - Sensor 2 07 1 V to 4 V – Sensor 1 ¹ 4 V to 1 V - Sensor 2 98 PWM: 250 hz, duty cycle: 10 – 90% 99 PWM: 250 hz, duty cycle: 0 - 100%	A 2.54 mm (.100") Pitch Male Header B 2.54 mm (.100") Pitch Male Header with 10" 22 AWG Mating Harness (505-507) C Solder pads E JST EH series Friction lock Male Header, 2.54 mm (4 position)

1 - Requires termination option E

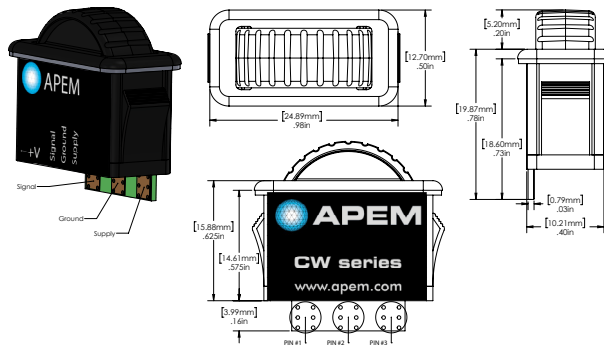
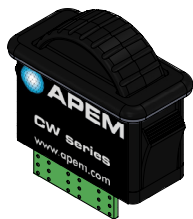
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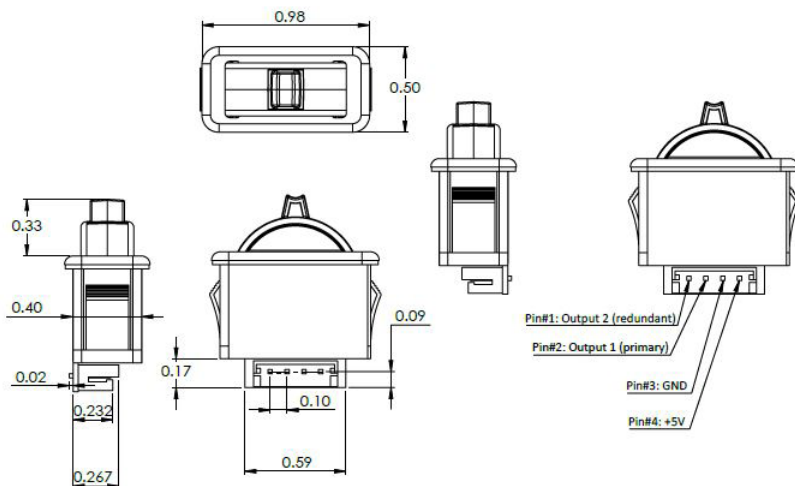
TERMINATION OPTION A



TERMINATION OPTION C

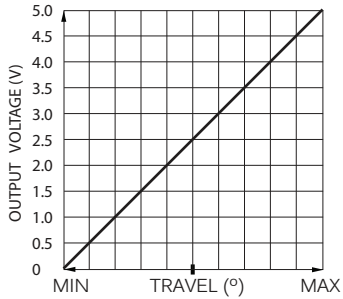


TERMINATION OPTION E

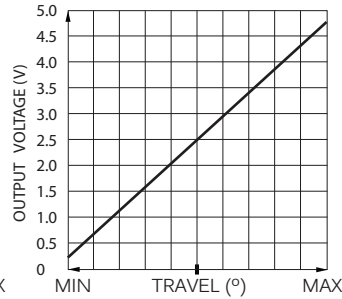




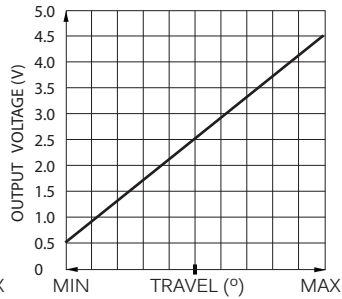
VOLTAGE OUTPUT OPTIONS



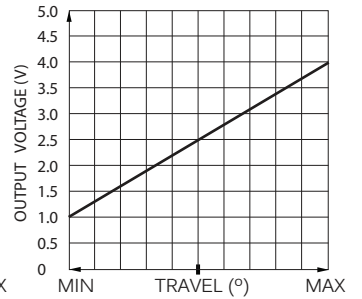
Option 00



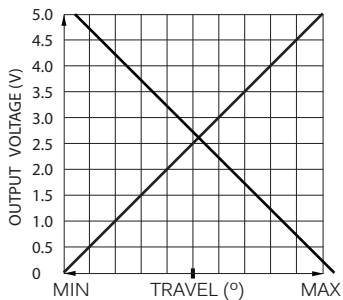
Option 01



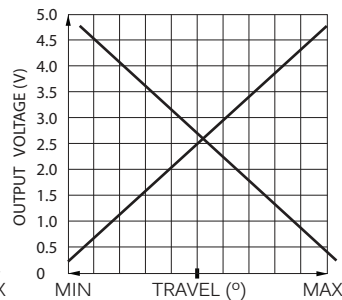
Option 02



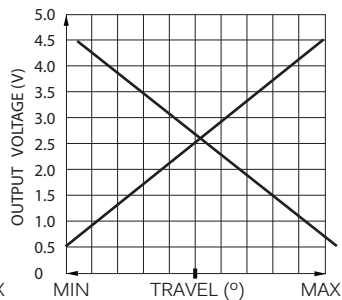
Option 03



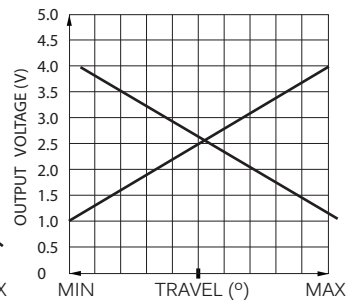
Option 04



Option 05



Option 06



Option 07